

REMARKS

Claims 1, 2, 4-6, 8-16, 18-28, and 30-46 were pending in the Application prior to the outstanding Office Action. In the Office Action, claims 1, 2, 4-6, 8-16, 18-28, and 30-46 were rejected under 35 U.S.C. §103(a).

I. RESPONSE TO REJECTIONS UNDER 35 U.S.C. §103(a)

The Examiner rejected claims 1, 2, 4-6, 8-16, 18-28, and 30-46 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,470,227 ("*Rangachari*") in view of U.S. Patent 6,463,352 ("*Tadokoro*").

A. Independent Claims 1, 15 and 27 Patently Distinguish over *Rangachari* in view of *Tadokoro*

Claims 1, 15 and 27 each recite, among other things, "receiving a first request from a client system via a network" "sending a first message to a tool in response to said first request," and "wherein said first message is operable for controlling an action of said tool." The apparatus that receives the first request and sends the first message acts as an intermediary between a client system and a tool. See for example Figure 1 illustrating client systems 112, 113, 114 and 115, server 110 and tools 111 and the specification at p. 8 line 13 through p. 10 line 5. In a preferred embodiment, a user at the client system can request an action of a tool, utilizing for example a Web browser. The intermediate apparatus, for example a server, will process the request from the client system, determine what message to send to which tool, and send a message to a tool to perform the requested action. The user may also interact with the server to query and modify tool configuration. Claims 1, 15 and 27 thus recite client-server communication and server-tool communication, and allow a client system to remotely operate a tool. In a preferred embodiment of the present invention, the client system is running a Web browser and communicates using HTTP. In this way, the present invention allows a user to remotely operate tools over a network using standard protocols and software.

Rangachari describes details of a material handling system in which object oriented programming is used to interface between applications and equipment. *Rangachari* discloses a number of software "servers" 49, all of which run on a single

computer program 10 in addition to an equipment manager 18 and a workflow engine 19. In *Rangachari*, a graphical user interface is disclosed with respect to workflow definition and registration, which is the process of determining in advance the steps of a job. *Rangachari* does not disclose a user interface with respect to direct tool management, and does not disclose remote management of a tool through requests received via a network. *Rangachari* does teach or suggest a tool server, such as in a preferred embodiment of the present invention, in which a user running a Web browser can communicate over a network to operate a tool.

Tadokoro describes the management of cutting machines over a network. Status information for each cutting machine is received by a data acquisition device and reported to a machine monitor object. Remote users running Web browsers can manipulate a database containing the details of a job order, and can query the status of machines. The cutting machines of *Tadokoro* can only be queried over the network. *Tadokoro* does not disclose the ability to remotely perform any action on cutting machines (see for example, Col. 1, lines 27-30). Figures 1, 2a and 2b illustrate cutting machines 1 with a one way path to data acquisition devices 3. *Tadokoro* does not teach or suggest a tool server, such as in the preferred embodiment of the present invention, in which a user running a Web browser can communicate over a network to operate a tool.

The Examiner has cited to several sections of *Rangachari* and *Tadokoro* in support of the rejection of independent Claims 1, 15 and 27 in view of this combination. Applicants analyze these citations for what they disclose in relation to Claims 1, 15 and 27.

Rangachari, Col. 8, lines 43-46 refers to the SECS industry standard communication protocol for communication with equipment. This refers to communication between a host and a tool, not communication between a client and a tool server. The present application refers to the SECS communication protocol in connection with the communication between the server and the tool (see for example page 30, lines 8-18).

Rangachari, Col. 9, lines 22-42 refers to the creation of a workflow using a graphical user interface (GUI). This refers to the definition of a workflow before it is

executed, not the actual execution of a workflow. This passage teaches away from the control of a tool by a user. In Rangachari, the user interacts with the workflow layer and does not interact with the lower architectural tiers (see especially Col. 9, lines 27-32).

Rangachari, Col. 10, lines 45-51, again refers to the creation of a workflow using a GUI. The workflow is created and registered by the user, but it is the application server that instantiates the workflow. This passage does not teach or suggest that a message can be sent to a tool in response to request received via a network by a user.

Rangachari, Col. 10, lines 52-64 refers to the invocation of the workflow by the workflow engine. An activity client invokes on or more application servers to fulfill requests. This passage does not teach or suggest that a message can be sent to a tool in response to request by a client system via a network.

Rangachari, Col. 6, lines 26-51, refers to the individual components of computer program 10. All of the components within the dashed line of Fig. 1 are contained in the single computer program 10. This passage does not teach or suggest the receipt of a request by a client system via a network to control a tool.

Rangachari, Col. 7, lines 20-24, discloses that the Equipment Manager 18 is able to provide communication paths with the equipment 40 as well as with other components. This passage does not teach that a message operable for performing an action on a tool is sent in response to a request from a client system received via a network.

Rangachari, Col. 8, lines 17-20, describes Host Interface 14, which is used to communicate with external systems, such as MES 46. Commands generated from within a software component running on computer program 10, such as Fab Application Server 51, are sent to external systems through Host Interface 14 (see also Col. 7, lines 46-55). This passage does not teach that a request received via a network is used to create a first message to perform an action on a tool.

Tadokoro Col. 10, lines 1-25, cited by the Examiner in reference to the "first predetermined field in a portion of said first request," discloses that VM object (5) runs as a standalone process on PC (5.1), and has its own IP address or its own ports at a shared IP address. The VM object in *Tadokoro* is responsible for polling the data acquisition device, maintaining polled values, and reporting maintained values (see Col.

8, lines 28-33). The VM object does not interact directly with browsers, but with machine monitor objects (7) (see Col. 8, lines 39-56). In contrast, the “first predetermined field” of Claims 1, 15 and 27 are part of the first request, which is received by a client system. This field is used to determine a type of the first request.

For at least the reasons stated above, claims 1, 15 and 27 are not obvious over *Rangachari* in view of *Tadokoro*. Applicants respectfully request the Examiner to allow claims 1, 15 and 27.

B. Dependent Claims 2, 4 – 6, 8 – 14, 16, 18 – 26, 28 and 30 – 46 Patently Distinguish over *Rangachari* in view of *Tadokoro*

Dependent claims 2, 4 – 6, 8 – 14, 16, 18 – 26, 28 and 30 – 46 depend directly or indirectly from independent claims 1, 15 and 27 and incorporate all of the limitations of the independent claims upon which they depend. Applicants respectfully assert that dependent claims 2, 4 – 6, 8 – 14, 16, 18 – 26, 28 and 30 – 46 are therefore patently distinguishable over *Rangachari* in view of *Tadokoro* for at least the reasons stated above.

Additional Remarks

The references cited by the Examiner but not relied upon have been reviewed, but are not believed to render the claims unpatentable, either singly or in combination.

The Examiner characterized the amendments made in the Response dated August 13, 2004 as “substantial” and that they “significantly affected the scope” of the claims. The Examiner has not specified how the amendments affected the scope of the claims. In any case, Applicant respectfully disagrees with this characterization. The amendments made to the claims were to improve clarity and to correct minor typographical errors. The only substantive claim limitation added to the independent claims was the phrase “from a client system” in reference to the first request. This claim element merely clarifies the nature of the “first request” that is received “via a network,” a feature that was implicit in the original claims.

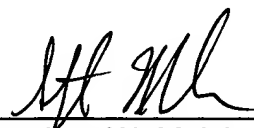
In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application are allowable, and a Notice of Allowance is requested.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. §1.136 for extending the time to respond up to and including today, July 5, 2005. Enclosed is a REQUEST FOR CONTINUED EXAMINATION.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-3548 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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